

SMART BACKUP!



PRIAM's Intelligent Interfaces For Winchester Discs And Tape Drives

Save time and money by using PRIAM's intelligent interfaces. PRIAM has expanded the SMART family to support *backup* to your Winchester disc systems. Take your pick from 1/4-inch streaming cartridge tape or 1/2-inch tape. PRIAM SMART Interfaces can be mounted on PRIAM drives or separately, and they can be powered from PRIAM's disc drive power supplies.

SMART

Lowest in cost of PRIAM's three intelligent interfaces, the SMART Interface is smart indeed. It includes error checking, disc formatting, selectable sector sizes, full-sector buffering, defect mapping, self-test, and power-down data protection.

SMART-E

Also low in cost, the SMART-E provides all the SMART functions, plus ECC with error correction transparent to the host and high-performance hardware/firmware. Backup is provided by daisy-chaining the EPI STR-Stream*

17-megabyte 1/4-inch cartridge drive or the Pragma DAC 2080* 80-megabyte 1/2-inch cartridge drive.

SMART-T

Compatible with the SMART and SMART-E, the SMART-T provides off-line streaming backup with host access to the database during backup. The SMART-T controls Archive Sidewinder*, DEI Streamer* and Cipher Quarterback* 1/4-inch streaming cartridge tape drives.

In addition to the SMART series, a complete list of disc controllers for popular host busses is available from PRIAM.

MAKE THE SMART CONNECTION FOR WINCHESTER DISC DRIVES AND BACKUP NOW! Get complete information about the SMART, SMART-E, and SMART-T by writing or calling:



PRIAM

*STR-Stream is a trademark of Electronic Processors, Inc.; DAC 2080 is a trademark of Pragma Data Systems, Inc.; Sidewinder is a trademark of Archive Corporation; Streamer is a trademark of Data Electronics, Inc.; Quarterback is a trademark of Cipher Data Products, Inc.

20 West Montague Expressway, San Jose, CA 95134 (408) 946-4600 TWX 910-338-0293

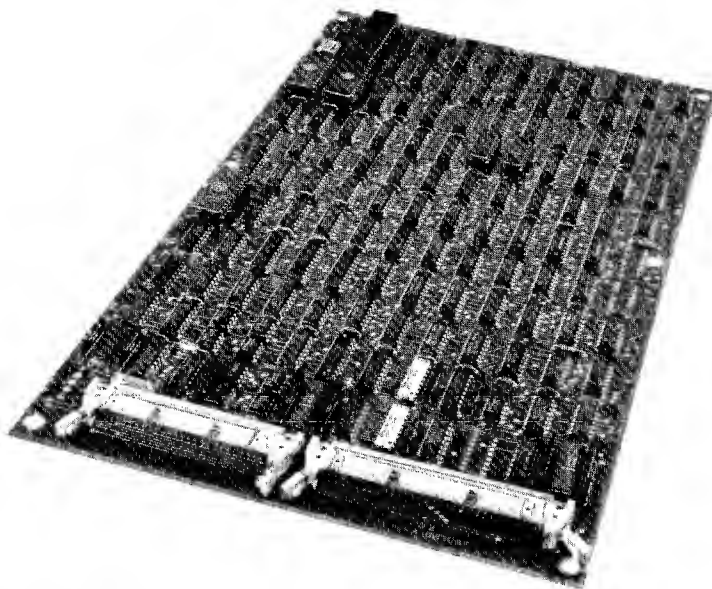
Other PRIAM
Sales Offices:

New England
(617) 444-5030

Mid-Atlantic
(201) 542-8778

Midwest
(312) 961-9654

Southern Calif.
(714) 994-3593



PRIAM SMART-E INTERFACE

The PRIAM SMART-E Interface is a powerful micro-processor-controlled device that supports any mix of PRIAM disc drives from 10 to 158 megabytes. The device's high-level command set and its general purpose host interface with DMA transfer allow easy attachment to a wide range of host buses. And the advanced SMART-E Interface architecture incorporates high-speed logic to meet the performance demands of advanced systems and fast data transfer rates. The SMART-E is an extended version of PRIAM's well-known SMART Interface. It includes all SMART features plus ECC, streamlined software, sector interleaving, a 2048-byte buffer and logical sector addressing.

The SMART-E Interface was designed specifically for PRIAM disc drives and is fully tested on all PRIAM drive types to ensure smooth storage subsystem integration. And since the majority of the high-level functions are performed in firmware, parts count is reduced and reliability is increased.



PRIAM

FEATURES

- Controls up to four daisy-chained drives.
- Supports all PRIAM 14-inch and 8-inch disc products and any intermix thereof.
- Designed for straightforward attachment to the typical microprocessor bus.
- Performs all serialization, deserialization, and disc format related functions.
- Selectable sector size: 128, 256, 512, and 1024 bytes.
- Buffer capacity of 2048 bytes.
- Full-sector buffer:
 - Data transfers may be program I/O or DMA driven
 - Buffered mode simplifies interfacing and eliminates data-late errors due to DMA latency
 - Buffer is prefilled prior to data transfer
 - Nonbuffered mode data transfers are at disc speed
- Device control block oriented: Simplifies host interface, reduces control protocols, isolates host from physical control of the drives.
- Media defects may be automatically avoided with transparent bad-sector flagging and alternate sector mapping.
- Automatic alternate-track assignment is made when there are more than three defects per track.
- Overlapped commands: For example, the host may seek or restore on three drives while seeking, reading, or writing on another drive.
- High-level Format command supports a variety of interleaved formats.
- Data may be addressed by logical sector number or a physical sector address.
- Implied Seek: Automatic track seek and position verification.
- Implied Operations: Automatic sequence up, restore, seek and position verification on read or write operations.
- Automatic self-test mode with resident microdiagnostics.
- Automatic power down data protection.
- Automatic error retry.
- Automatic Head and Cylinder Switching during multi-sector operations.
- Header and data are checked by 32-bit ECC. Automatic correction is transparent to the Host.
- Can be mounted piggy-back on PRIAM 8-inch and 14-inch disc drives.
- Can be powered by the PRIAM 14-inch disc drive optional power supply.

TRANSFER RATE

0 to 2 megabytes/second.

POWER

3 A @ +5 VDC. Supplied by optional PRIAM 14-inch disc drive power supply or by host system.

PHYSICAL DIMENSIONS

8 inches by 14 inches.

CONNECTORS

- Signal: 40-pin ribbon cable. 3M #3432-1302 or equivalent.
- Power: 2-pin Molex Housing Series 2139 #09-50-3021 Molex Pins Series 2478 #08-50-0105 or equivalent.

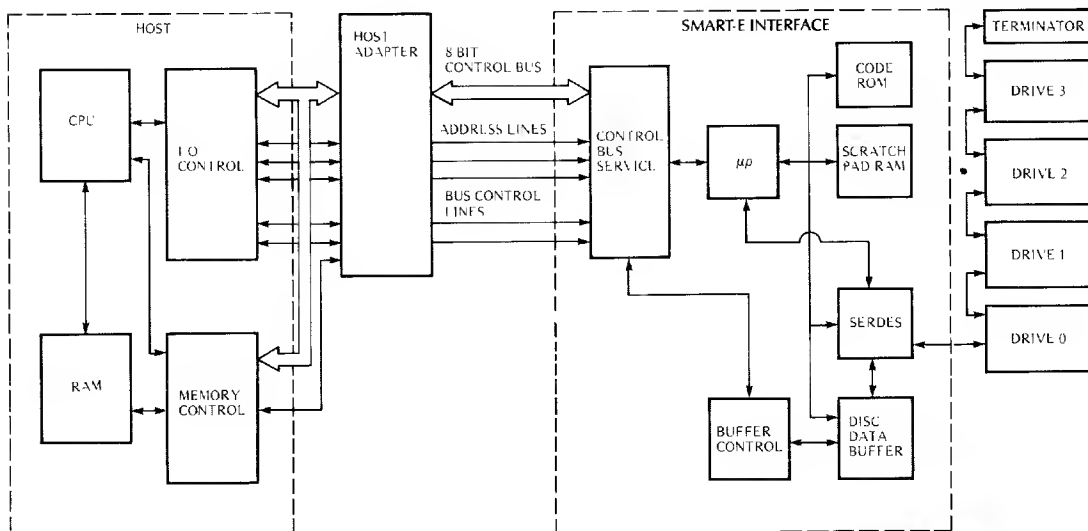
FUNCTIONAL CONTROLLER COMMANDS

- **Write Data:** Causes data to be written according to specified parameters, e.g., which drive, cylinder, head, sector, and number of sectors. Sequence Up and Seek are implied by this command.
- **Read Data:** Causes data to be read according to same parameters specified in Write Data command.
- **Format Disc:** Performs complete disc formatting operation, including assignment of alternate sectors for each sector containing a defect.
- **Format Cylinder:** Limits formatting operation to the cylinder defined by parameters.
- **Format Track:** Limits formatting operation to track defined by parameters.
- **Verify Disc:** Verifies that disc is formatted correctly. Each sector ID and data field is read and CRC checked.
- **Verify Cylinder:** Limits verify operation to cylinder defined by parameters.
- **Verify Track:** Limits verify operation to track defined by parameters.
- **Write ID:** ID field will be written at physical sector specified by parameters.
- **Read ID:** ID field will be read from specified physical sector.
- **Verify ID:** ID field will be read from specified physical sector except that data is not transferred to the host. The ID field ECC will be checked to verify the ID was written without a disc-generated error.
- **Verify Data:** Specified data field will be read from disc, except that data will not be transferred to the host. Data field ECC will be checked to verify the data was written without a disc-generated error.
- **Read Defect Field:** Skip defect field will be read in accordance with specified parameters.
- **Read Drive Status:** Used to obtain current status of drive.

- **Sequence Up—Wait:** Causes addressed drive to enable its spindle motor. When command is complete, drive will be at speed and heads will be positioned at cylinder zero.
- **Sequence Up—Return:** Causes addressed drive to enable its spindle motor. This command is completed before drive is at speed and heads positioned at cylinder zero.
- **Sequence Down:** Addressed drive will disable the spindle motor and initiate dynamic braking.
- **Restore Drive:** Addressed drive moves access arm to cylinder zero.
- **Seek:** Drive positions heads over specified cylinder and selects specified head.
- **Write Buffer:** Causes data transfer from host to data buffer. This command is implied in every write operation.
- **Read Buffer:** Causes data transfer from data buffer to the host. This command is implied in every read operation.
- **Command Completion Acknowledge:** This command is issued after noticing that a command has been completed via the Controller Status Register and reading the appropriate Result Registers. Issuing this command releases the Result Registers for use in the next command completion phase.

DATA VERIFICATION/CORRECTION TECHNIQUE

- **Error Checking and Correction (ECC) value** is computed by the SMART-E Interface during each write operation based on actual data content or header content.
- **Computed ECC value** is automatically appended to the end of each data and header field by the SMART-E Interface.
- If automatic correction is enabled, the SMART-E Interface automatically computes the error syndrome value based on the actual read and performs correction. Also, the sector is checked for defects and an alternate sector will automatically be assigned if required.
- If automatic correction is not enabled, syndrome information is available for Host correction.



SMART-E INTERFACE ARCHITECTURE AND SYSTEMS ATTACHMENT

NOTE: While the SMART-E and SMART Interfaces are interchangeable, data written with one type cannot be read by the other. Changing from the SMART-E to the SMART, or vice versa, will require the disc to be reformatted.



PRAM

PRIAM BACK UP SUGGESTIONS

BACK UP DEVICES

<u>Type of Device</u>	<u>Manufacturer and Contact</u>	<u>Brief Specifications</u>
Standard 1/2-inch streaming tape drive	Cipher Data Products, Inc. 10225 Willow Creek Road San Diego, CA 92131 TEL: (714) 578-9100 TWX: 910-335-1251 Larry Hemmerich, VP Marketing Frank Kirchhoff, Sales Manager	Model: MicroStreamer Capacity: 45 & 90 megabytes Size: 8.75" x 17" x 22"
1/2-inch tape cartridge drive	Pragma Data Systems, Inc. 610 Palomar Avenue Sunnyvale, CA 94086 TEL: (408) 738-8215 TLX: 171627-Attn: PRAGMA TWX: 910-379-0029-Attn: PRAGMA Tom McCrystal, President John Peters, Product Manager	Model: DAC 2080 Capacity: 80 megabytes Size: 4.62" x 8.55" x 14.25" Interface: PRIAM compatible
	Megatape Corporation 1041 Hamilton Road Duarte, CA 91010 TEL: (213) 357-9921 Gene Moscaret, President Bill Chambers, VP Marketing	Model: MegaStor 200 & 400 Capacity: 160 & 300 megabytes (available June '82) Size: 8.75" x 12" x 20" Interface: Cipher MicroStreamer compatible
1/4-inch tape cartridge drive	Electronic Processaors, Inc. 1265 West Dartmouth Avenue Englewood, CO 80110 TEL: (303) 761-8540 TWX: 910-933-0171 Bob Dershang, Executive VP Vince Stinton, Product Manager	Model: STR-Stream Capacity: 17 megabytes Size: 4" x 7" x 13" Interface: PRIAM, DEI Funnel, and Pertec compatible
	Archive Corporation 3540 Cadillac Avenue Costa Mesa, CA 92626 TEL: (714) 641-0279 TWX: 910-595-2458 Howard Lewis, President	Model: Sidewinder Capacity: 10 & 20 megabytes Size: 4" x 8" x 14"
	Cipher Data Products, Inc. (See address and phone above)	Model: Quarterback Capacity: 10 & 20 megabytes Size: 4" x 8" x 14" Interface: Archive Sidewinder compatible
	Data Electronics, Inc. 10150 Sorrento Valley Road San Diego, CA 92121 TEL: (714) 452-7840 TLX: 69-7118 Sam Thompson, VP Marketing Whitney Lynn, Nat'l Sales Manager	Model: Funnel & Streamer Capacity: 10, 17 & 20 megabytes Size: 4" x 8" x 14"

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(OVER FOR SELECTED CONTROLLERS)

PRIAM BACK UP SUGGESTIONS (CONTINUED)

BACKUP DEVICE CONTROLLERS

SMART-Compatible (Generalized Host Bus)

EPI and PRAGMA are supported in daisy-chain mode by the PRIAM SMART-E.

Host Bus

Host adapters are available from selected sources:

<u>Host</u>	<u>Adapter Vendor</u>
Data General	Rianda
DEC LSI-11	Peritek
General Automation	Dataplex
Motorola	
-MC6800	Novex
-MC68000	Child
S-100	Alloy Engineering

Archive Sidewinder/Cipher Quarterback and DEI Streamer are supported by the SMART-T.

Host adapters are available from ADES for Intel Multibus, S-100 and Zilog Z-80.

CIPHER MICROSTREAMER/MEGATAPE MEGASTOR

Alloy Engineering
Computer Products
Custom Systems
Dataplex
Dilog
MicroComputer Systems
Quentin Research
Schuler & Associates
Spectra Logic

S-100
Multibus
Data General, TI-990
General Automation
DEC LSI-11, PDP-11
TI-990
Data General
TI-990
Data General, DEC PDP-11, Perkin Elmer, TI-990

ARCHIVE SIDEWINDER/CIPHER QUARTERBACK

SMART-T
Child
Computer Products
Rianda Electronics
Spectra Logic

Intel Multibus, S-100, Z-80
Motorola MC68000
Intel Multibus
Data General
TI-990

DEI STREAMER

SMART-T

Intel Multibus, S-100

DEI FUNNEL/EPI STR-STREAM

Alloy Engineering
Xylogics

S-100
DEC LSI-11

EPI STR-STREAM* & PRAGMA DAC 2080*

Computer Products
Custom Systems (available '82)
Dataplex
Dilog
Intel
Mator
U.S. Design
Xylogics

Intel Multibus
Data General, TI-990
General Automation
LSI-11
Intel Multibus
IEEE 488, Intel Multibus, RS 232
DEC LSI-11
DEC LSI-11

* NOTE: PRIAM-compatible controllers and SMART-E host adapters may require microcode or software driver modifications to support the EPI STR-Stream and PRAGMA DAC 2080.

* * *

See the PRIAM Controller Directory for more complete information on controllers and vendors. The directory is available from PRIAM on request.



* * *

PRIAM CORPORATION
20 West Montague Expwy
San Jose, CA 95134
TEL: (408) 946-4600
TWX: 910-338-0293
3308B/131A

CONTROLLERS FOR PRIAM DISC DRIVES (OVER FOR ADDRESS/PHONE)

<u>HOST BUS</u>	<u>DISC INTERFACE</u>	<u>COMMENTS</u>
<u>DATA GENERAL (NOVA/ECLIPSE)</u>		
Custom Systems	PRIAM	Emulates DG-6070, 6060; backup controller for Cipher MicroStreamer; supports RD05, AOS, BLISCOBAL, IRIS
Minicomputer Technology	SMD	Emulates all models of Zebra 6060 series; supports RDOS, AOS
Quentin Research	SMD	Models 6100 and 8200; emulates DG-6098 or DG-6103; supports RDOS, AOS, Point 4 IRIS, IPI BLISCOBAL; 8200 has Cipher Microstreamer port
Rianda Electronics	SMART	Model 2900; backup port for Archive/Cipher streamers; supports RDOS, IRIS
Spectra Logic	SMD	Spectra 20; DG-6067 emulator; backup port for Cipher MicroStreamer; supports RDOS, AOS, IRIS; Spectra 10 supports disc only
Xylogics	SMD	Model 850; supports RDOS, AOS, BLISCOBAL, IRIS
<u>DIGITAL EQUIPMENT CORP</u>		
<u>Q-BUS (LSI-11)</u>		
Dilog	PRIAM	Model DQ413; RP02 and RL01/02 emulation; Cipher MicroStreamer backup
Emulex	SMD	Model SC02; RP02/03 emulation
Minicomputer Technology	SMD	RK06/07 and RM02/03 emulation; supports RSX-11M, RT-11, RSTS/E
Peritek	SMART	Model PRM-Q11; supports RSX-11M, RT-11, UNIX
USDC	PRIAM	Model USDC 1101; supports RSTS/E, RSX-11M, UNIX; multiported, data caching, ECC; backup port for PRAGMA and EPI tape drives
Xylogics	PRIAM	Model 530; emulates RL01/02; supports RSX-11M, RT-11, RSTS/E
<u>UNIBUS (PDP-11)</u>		
Dilog	SMD	Model DU202; RP02 and RL01/02 emulation; Cipher MicroStreamer backup
Emulex	SMD	Model SC21; RP02/03 emulation; also attaches to PDP-11/70
Spectra Logic	SMD	Spectra 21; RM02/03 emulation; backup port for Cipher MicroStreamer; supports RSX-11M, RSTS/E; Spectra 11 supports disc only
USDC	PRIAM	Model USDC 1151; supports RSTS/E, RSX-11M, RT-11, UNIX; multiported, data caching, ECC; backup port for PRAGMA and EPI tape drives
Xylogics	SMD	Model 650; emulates RM02; supports RSX-11M, RT-11, RSTS/E
<u>GENERAL AUTOMATION</u>		
Datplex	SMART	Attaches to GA-16 and SPC-16 series CPU models; supports CONTROL, MIBS, RTOS, DBOS; backup controller for Cipher Microstreamer
<u>IEEE 438</u>		
Mator	PRIAM	Attaches to Commodore PET (emulates DOS) and Hewlett Packard; EPI/PRAGMA
<u>INTEL (MULTIBUS)</u>		
ADES	PRIAM	Attaches to iSBC or MDS, 8-bit or 16-bit Multibus; supports CP/M and MP/M; backup port for Archive/Cipher and DEI streamers
Computer Products	PRIAM	Attaches to iSBC or MDS; supports CP/MP/M & CP/M86; backup port for Cipher MicroStreamer and Archive/Cipher streamers
Intel	PRIAM	Model iSBC 215B; attaches to iSBC 80, 88, and 86
Mator	PRIAM	Operates in DMA or parallel modes; supports EPI/PRAGMA tape drives
<u>MOTOROLA</u>		
<u>MC6800 (EXORCISER BUS)</u>		
Novex	SMART	Macromodule Series-The Controller; 6809 software driver; 4-channel DMA; uninterruptible clock calendar; backup port for floppy disc
<u>MC68000 (VERSABUS)</u>		
Child	SMART	Model DTA; backup port for Archive/Cipher streamers; supports DMA
Motorola	SMD	Model M68KUDC; supports VERSADOS executive and multi-user/multi-task file manager; backup port for floppy disc
<u>PERKIN ELMER (INTERDATA)</u>		
Spectra Logic	SMD	Model Spectra 14; MSM emulation
<u>RS-232</u>		
Mator	PRIAM	Full communications envelope and file management; supports EPI/PRAGMA
<u>S-100</u>		
ADES	PRIAM	Supports CP/M, MP/M; backup port for Archive/Cipher and DEI streamers
Alloy Engineering	SMART	Supports CP/M; backup port for DEI cartridge, Cipher Microstreamer
<u>TI-990</u>		
Custom Systems	PRIAM	Attaches to CPU models /10, /12; supports DX-10; Cipher MicroStreamer backup
Microcomputer Systems	SMD	Model 1990; attaches to CPU models /5, /10, /12; supports DX-10; backup controller for Cipher MicroStreamer
Spectra Logic	SMD	Spectra 26; backup ports for Cipher Microstreamer and Archive/Cipher streamers; supports DX-10; Spectra 16 is disc only
<u>ZILOG Z-80</u>		
ADES	PRIAM	Supports CP/M, MP/M; backup port for Archive/Cipher and DEI streamers

ADES
2627 Pomona Blvd.
Pomona, CA 91766
(714)594-5858
DON WATZ, Sales Manager
BILL HORTON, V.P. Engineering

ALLOY ENGINEERING CO., INC.
12 Mercer Road
Natick, MA 01760
(617)655-3900
TWX: 710-346-0394
DICK GORGENS, VP & General Manager
NIGEL SPICER, Director of Marketing

CHILD, INC.
P.O. Box 2326
Ann Arbor, MI 48106
(313) 971-8192
GEOFF ROPER, Exec. VP
MICHAEL FISCHER, VP Systems

COMPUTER PRODUCTS CORPORATION
2415 Annapolis Lane
Plymouth, MN 55441
(612) 559-2034
TLX: 985641-ATTN-SHERMAN KEMMER
RON THOMAS, President
STU REILE, Director, Marketing & Sales

CUSTOM SYSTEMS, INC.
6850 Shady Oak Road
Eden Prairie, MN 55344
(612) 941-9480
TLX: 290975
DAVE CLINTON, President
PARIS CAMPBELL, VP Marketing

DATAPLEX, INC.
2351 Devon Avenue
Elkgrove Village, IL 60007
(312)860-5665
WALTER WULCZAK, President
RUBY CUTZER, Director Marketing

DIALOG
12800-G Garden Grove Blvd.
Garden Grove, CA 92643
(714)534-8950
TLX: 681399
LES ALBERTS, VP Marketing
DENNIS EDWARDS, Sales Manager

EMULEX
2001 E. Deere Ave.
Santa Ana, CA 92705
(714)557-7580
TWX: 910-595-2521
FRED COX, President
FLIP BEGICH, National Sales Director

INTEL CORPORATION
5200 Northeast Elan Young Parkway
M/S H2-2E-343
Hillsboro, OR 97123
(503)640-7135/7156
TWX: 910-467-7073
BILL WALKER, OEM Marketing (x 7135)
BRUCE OLENCUK, 215B Prod. Mgr. (x 7156)

MATOR NEW TECHNOLOGY
Willet House
12 Grand Avenue
Hove, East Sussex, BN3 2FQ
Brighton 720451/2 (std code 0273)
TLX: 877680
JOHN MARSH, VP Marketing
-OR-

MATOR INC.
3002 Santa Monica Blvd.
Santa Monica, CA 90404
213-828-5200
TOM MISKEFULLY, Managing Director

MICROCOMPUTER SYSTEMS CORPORATION
432 Lakeside Drive
Sunnyvale, CA 94086
(408)733-4200
TWX: 910-339-9359
MIKE RAINEY, General Manager-OEM
NEAL GREELEY, National OEM Sales Manager

MINICOMPUTER TECHNOLOGY
2470 Embarcadero Way
Palo Alto, CA 94303
(415)856-7400
TWX: 910-373-1292
RICHARD HILL, President
NICK HORN, VP Marketing

MOTOROLA, INC.
(See local Motorola Semiconductor
Division MC68000 Sales Engineer)

NOVEX, INC.
P.O. Box 3006
Gaithersburg, MD 20760
(301)840-8575
STEVE PARKS, President

PERITEK
3014 Lakeshore Avenue
Oakland, CA 94610
(415)465-9000
TWX: 910-366-2029
ERIC WUGSBERG, President
TOM BIRCHELL, Sales Manager

QUENTIN RESEARCH, INC.
19355 Business Center Drive
Northridge, CA 91324
(213)701-1006
TWX: 910-493-2174
DAN DUKE, President

RIANDA ELECTRONICS
2535 Via Palma
Anaheim, CA 92801
(714)995-6552
TLX: 18-1623
WALLY RIANDA, President
DICK MC CORMICK, VP Marketing

SPECTRA LOGIC
1227 Innsbruck Drive
Sunnyvale, CA 94086
(408)744-0930
TLX: 172-524
STEVE ROBERTS, VP Marketing
BOB CARTER, National Sales Manager

U.S. DESIGN CORPORATION
5100 Philadelphia Way
Lanham, MD 20706
(301) 577-2880
BOB RUDY, National Sales Manager

XYLOGICS
42 Third Avenue
Burlington, MA 01803
(617)272-8140
TWX: 710-332-0262
WAYNE GRIFFITH, President
LYNN SPEAKER, VP Sales



PRIAM

PRIAM CORPORATION
20 West Montague Expwy
San Jose, CA 95134
(408) 946-4600
TWX 910-338-0293

2309A/8A

HOST BUS	DISC INTERFACE	COMMENTS
<u>DATA GENERAL (NOVA/ECLIPSE)</u>		
Custom Systems	PRIAM	Emulates DG-6070, 6060; backup controller for Cipher MicroStreamer; supports RDOS, AOS, BLISCOBAL, IRIS
Minicomputer Technology	SMD	Emulates all models of Zebra 6060 series; supports RDOS, AOS
Quantin Research	SMD	Models 6100 and 8200; emulates DG-6098 or DG-6103; supports RDOS, AOS, Point 4 IRIS, IPI Blis/Cobol; model 8200 has Cipher MicroStreamer backup port emulating DG-6021 and DG-6026
Rianda Electronics	SMART	Backup port for Archive cartridge drives; supports RDOS, BLISCOBAL, IRIS
Spectra Logic	SMD	Spectra 20; DG-6067 emulator; backup port for Cipher MicroStreamer; supports RDOS, AOS, IRIS
Xylogics	SMD	Model 850; supports RDOS, AOS, BLISCOBAL, IRIS
<u>DIGITAL EQUIPMENT CORP</u>		
<u>Q-BUS (LSI-11)</u>		
Dilog	PRIAM	Model DQ203; RP02 and RL01/02 emulation; backup controller for Cipher MicroStreamer
Emulex	SMD	Model SC02; RP02/03 emulation
Mator Systems Ltd.	PRIAM	
Minicomputer Technology	SMD	RK06/07 and RM02/03 emulation; supports RSX-11M, RT-11, RSTS/E
Peritek	SMART	Model PRM-Q11; supports RSX-11M, RT-11, UNIX; also supports DEC 22-bit "STD 160" Q-BUS
Xylogics	PRIAM	Model 530; emulates RL01/02; supports RSX-11M, RT-11, RSTS/E
<u>UNIBUS (PDP-11)</u>		
Dilog	PRIAM	Model DU203; RP02 and RL01/02 emulation; backup controller for Cipher MicroStreamer
Emulex	SMD	Model SC21; RP02/03 emulation; also attaches to PDP-11/70
Minicomputer Technology	SMD	Same as LSI-11 above; also emulates RP04/06
Spectra Logic	SMD	Spectra 21; RM02/03 emulation; backup port for Cipher MicroStreamer; supports RSX-11M, RSTS/E
Xylogics	SMD	Model 650; emulates RM02; supports RSX-11M, RT-11, RSTS/E; also attaches to VAX-11/780
<u>GENERAL AUTOMATION</u>		
Dataplex	SMART	Attaches to GA-16 and SPC-16 series CPU models; supports CONTROL, MIBS, RTOS, DEOS; backup controller for Cipher MicroStreamer
<u>INTEL (MULTIBUS)</u>		
ADES	PRIAM	Attaches to iSBC or MDS, 8-bit or 16-bit Multibus; supports CP/M and MP/M; backup port for Archive cartridge
Computer Products	PRIAM	Attaches to iSBC or MDS; supports CP/M; backup port for Cipher MicroStreamer or DEI cartridge; also attaches to Z-80 Multibus
Intel	PRIAM	Model iSBC 215B; attaches to iSBC 80, 88, and 86
Mator Systems Ltd.	PRIAM	
<u>MOTOROLA</u>		
<u>MC6800 (EXORCISER BUS)</u>		
Novex	SMART	Macromodule Series-The Controller; 6809 software driver; 4-channel DMA; uninterruptible clock calendar; backup port for floppy disc
<u>MC68000 (VERSABUS)</u>		
Motorola	SMD	Model M68KUDC; supports VERSADOS executive and multi-user/multi-task file manager; backup port for floppy disc
SV Associates	PRIAM	
<u>PERKIN ELMER (INTERDATA)</u>		
Minicomputer Technology	SMD	Model EDC23; supports OS/16 and OS/32
Spectra Logic	SMD	Model Spectra 14; MSM emulation
<u>RS-232</u>		
Mator Systems Ltd.	PRIAM	
<u>S-100</u>		
ADES	PRIAM	Supports CP/M, MP/M; backup port for Archive cartridge
Alloy Engineering	SMART	Supports CP/M; backup port for DEI cartridge, Cipher MicroStreamer
Mator Systems Ltd.	PRIAM	
<u>TI-990</u>		
Custom Systems	PRIAM	Attaches to CPU models/10,/12; supports DX-10; backup controller for Cipher MicroStreamer
Microcomputer Systems	SMD	Model 1990; attaches to CPU models /5, /10, /12; supports DX-10; backup controller for Cipher MicroStreamer
Schuler & Associates	SMD	Distributor for MSC TI-990 controller line

ADES
42627 Potomac Blvd.
Potomac, CA 91766
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RAY LAHAR, President
DAYN HOLSTROM, V.P. Marketing

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DICK GORGENS, VP & General Manager
NIGEL SPICER, Director of Marketing

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MIKE QUEALY, Vice President

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WALTER WULCZAK, President
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DILOG
12800-G Garden Grove Blvd.
Garden Grove, CA 92643
(714)534-8950
TLX: 681399
GLENN SALLEY, President
LES ALBERTS, Sales Manager

EMULEX
2001 E. Deere Ave.
Santa Ana, CA 92705
(714)557-7580
TWX: 910-595-2521
- FRED COX, President
BILL ROBERTS, Chairman

INTEL CORPORATION
5200 Northeast Elan Young Parkway
M/S H2-2E-343
Hillsboro, OR 97123
(503)640-7135/7156
TWX: 910-467-7073
BILL WALKER, OEM Marketing (x 7135)
BRUCE OLENCHUK, 215R Prod. Mgr. (x 7156)

MATOR SYSTEMS LTD.
Willet House
12 Grand Avenue
Hove, East Sussex, BN3 2FQ
Brighton 220451/2 (std code 0273)
TLX: 877680
TOM MISKELLY, Managing Director
-OR-
3002 Santa Monica Blvd.
Santa Monica, CA 90404
213-828-5200
SARAH PARK, Office Manager

MICROCOMPUTER SYSTEMS CORPORATION
432 Lakeside Drive
Sunnyvale, CA 94086
(408)733-4200
TWX: 910-339-9359
MIKE RAINEY, General Manager-OEM
NEAL GREELEY, National OEM Sales Manager

MINICOMPUTER TECHNOLOGY
2470 Embarcadero Way
Palo Alto, CA 94303
(415)856-7400
TWX: 910-373-1292
DON DILLEY, President
NICK HORN, VP Marketing

MOTOROLA, INC.
(See local Motorola Semiconductor
Division salesperson)

NOVEX, INC.
P.O. Box 3006
Gaithersburg, MD 20760
(301)840-8575
STEVE PARKS, President

PERITEK
3014 Lakeshore Avenue
Oakland, CA 94610
(415)465-9000
TWX: 910-366-2029
ERIC WUGSBERG, President
TOM BIRCHELL, Sales Manager

QUENTIN RESEARCH, INC.
19355 Business Center Drive
Northridge, CA 91324
(213)701-1006
TWX: 910-493-2174
DAN DUKE, President

RIANDA ELECTRONICS
2535 Via Palma
Anaheim, CA 92801
(714)995-6552
TLX: 18-1623
WALLY RIANDA, President
DICK MC CORMICK, VP Marketing

SCHULER & ASSOCIATES, INC.
225 East Airport Freeway
Irving, TX 75062
(214)258-8600
JOE SCHULER, President
JACKIE POWELSON, Program Manager

SPECTRA LOGICS
1227 Innsbruck Drive
Sunnyvale, CA 94086
(408)744-0930
ALAN ABBOTT, President
STEVE ROBERTS, VP Marketing

SV ASSOCIATES
526 San Gabriel Court
Pleasanton, CA 94566
(415)846-7153
MARTY PLOTKIN, President

XYLOGICS
42 Third Avenue
Burlington, MA 01803
(617)272-8140
TWX: 710-332-0262
WAYNE GRIFFITH, President
LYNN SPEAKER, VP Sales



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3096 ORCHARD DRIVE, SAN JOSE, CA 95134 (408) 946-4600 TWX 910-338-0293

August 24, 1981

Mr. Eric Wugsberg, President
Peritek
3014 Lakeshore Avenue
Oakland, CA 94610

Dear Eric:

I note that you offer our disc drive plus SMART Interface to the LSI-11 market. We have now delivered our first SMART-E Interface (attached to a 6650-10).

Benchmark performance improved from 20 minutes with the SMART Interface to 6 minutes with the SMART-E. Moreover, the customer (Tom Phinney, VP; Dataplex, Inc.; (312) 860-5665) says that the SMART-E is four times as fast on some tasks. Our own engineers say that you can expect anywhere from 2X to 10X performance improvement using the SMART-E versus the SMART.

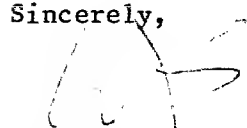
So, we have a real hot product to sell: The DISKOS 6650 with the SMART-E. I have enclosed a couple of specs for you as well as a little extra ammo. It's a product that will give an awful lot of bang for the buck, so you can be proud to present it to your customers. For example, a Q500 account can get 68 megabytes of disc storage (6650-10), a sophisticated controller (SMART-E), and a power supply and terminator for only \$3,575. And very soon (early 4Q81) the SMART-E will support the EPI and PRAGMA tape drives.

All your accounts need to attach this powerhouse to a LSI-11 bus is your host adapter. I thought you might want to know about it so you can modify your adapter to support the SMART-E as well as the SMART.

As always the SMART-E supports the entire PRIAM line.

Good luck with your market and the new SMART-E!

Sincerely,


WILLIAM J. SCHROEDER
President

WJS/jen

encl.